

Two New *Necydalis* (Coleoptera, Cerambycidae) from Sichuan and Guangxi, Southwest China

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Abstract Two new species of the genus *Necydalis* are described from Sichuan Province and Guangxi Zhuangzu Ziziqu, Southwest China. Of these, *N. (Necydalis) uenoi* sp. nov. from Shangliang of Sichuan is related to *N. shinborii* from northern Vietnam, and the other one, *N. (N.) choui* sp. nov. from Mt. Dayu Shan of Guangxi is most closely allied to *N. esakii* from Taiwan.

Through the courtesy of my collaborators, I had an opportunity to examine a series of necydaline specimens collected from Sichuan Province and Guangxi Zhuangzu Ziziqu, Southwest China. They included two unknown species belonging to the subgenus *Necydalis* s. str., of which the Sichuan one is a relative of *Necydalis shinborii* TAKAKUWA et NIISATO from northern Vietnam, and the other one is most closely allied to *N. esakii* MIWA et MITONO from Taiwan. In this paper, I will describe and illustrate them under the names *N. uenoi* from Sichuan and *N. choui* from Guangxi.

Before going further into details, I wish to express my deep indebtedness to Dr. Shun-Ichi UENO of the National Science Museum (Nat. Hist.), Tokyo, for his constant guidance, and to Mr. Wen-I CHOU of the National University of Taiwan, Taipei, for his offering the valuable material and giving useful information. The abbreviations used in the descriptions are already mentioned in the recent paper by NIISATO and OHBAYASHI (2004, p. 202).

Necydalis (Necydalis) uenoi sp. nov.

(Figs. 1, 2, 5–11, 12, 13 & 16)

Large species having relatively robust body, long elytra with distinct sutural angles, and stout appendages. Closely allied to *N. shinborii* from northern Vietnam and *N. montipanus* from northeastern Laos, but not showing distinct heterothallism as in other members of the *N. nanshanensis* group.

Male. Colour black in head and thoraces, shiny, brown and more or less matted in the rests; mouthparts reddish brown, with black margins of mandibles, slightly yellowish in labrum and apical 2/5 of clypeus; antennae brown, shiny in basal four segments, infusate at basal 2/3 of scape; elytra brown, infusate in apical fifth, narrowly so along suture and broadly so in apical 5/8 of external margins; hind wings translu-

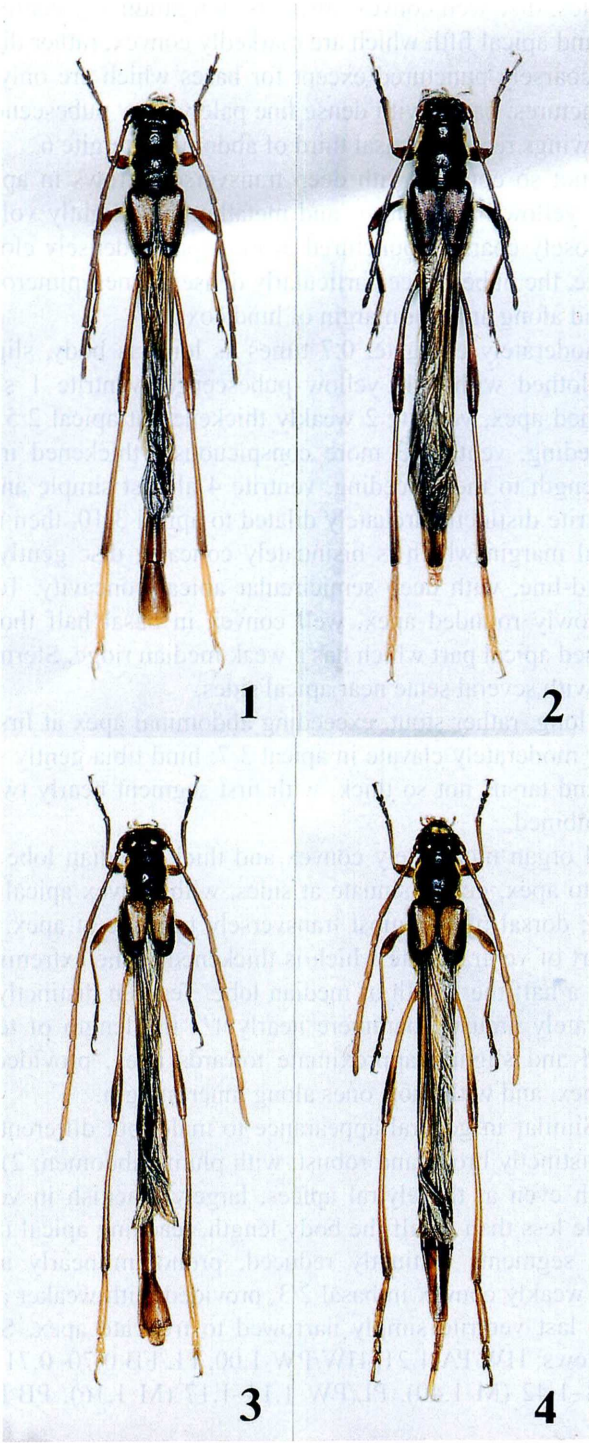
cent dark brown; abdomen dark reddish brown, longitudinally infusate along median line of ventrite 1; legs brown, infusate in coxae, trochanters, basal parts of fore and mid femora, and fore and mid tarsi except for basal segments, hind tarsus yellow.

Head slightly voluminous, a little broader than the maximum width of pronotum, closely and coarsely punctured, clothed with golden yellow pubescence, especially dense on frons and tempora, HW/PA 1.26–1.27 (M 1.26), HW/PW 1.04–1.06 (M 1.05); frons quadrate, almost flattened, with a deep median longitudinal furrow, running from apex to posterior margin of gently raised occiput, FL/FB 0.76–0.79 (M 0.77), FB/FA 1.00; clypeus with apical lobe transverse trapezoidal, truncate at margin, weakly raised, moderately punctured in basal 3/5, basal lobe somewhat transverse, punctured as on apical lobe, fronto-clypeal suture very wide and deep; genae moderate in depth, nearly a half the depth of lower eye-lobes; tempora moderately projected laterad, slightly exceeding the level of eyes; eyes weakly prominent. Antennae stout and relatively long, 0.52–0.53 times as long as body, almost reaching apical third of ventrite 4, more or less flattened in segments 5–10, bluntly serrate at apices of segments 7–9, densely clothed with minute pale pubescence and brown one; scape short and broad, gently arcuate, slightly depressed on dorsum, 5/6 the length of segment 3, provided with shallow punctures, segments 3 and 4 slightly thickened apicad, the latter segment 2/3 the length of the former, segments 5–7 nearly equal in length, segment 5 the longest, terminal segment simply blunt at the extremity.

Pronotum rather long, slightly longer than the maximum width, hardly contracted to both apex and base, with simply arcuate lateral swellings near the middle, constricted in front, weakly narrowed to apical third before the lateral swellings, weakly dilated in basal third; PL/PA 1.38–1.39 (M 1.38), PL/PW 1.14–1.16 (M 1.15), PB/PA 1.14–1.15 (M 1.14), PW/EW 0.87–0.88 (M 0.87), PL/EL 0.85; disc rather markedly convex in basal 2/3, forming a large callosity which is divided by a shallow median furrow and obliquely depressed at sides, distinctly depressed at apical third and basal fourth; surface entirely provided with relatively large coarse punctures, and also with a few oblong ones near base and apex, transversely furrowed near base, moderately clothed with long yellow hairs throughout, and partly with dense golden yellow pubescence at sides except for the lateral swellings. Scutellum triangular though obtuse at apex, distinctly convex, longitudinally concave at middle, golden yellow pubescent.

Elytra long, distinctly longer than wide, distinctly longer than pronotum, reaching basal margin of hind coxae, widest at humeri, moderately exposing the sides of meso- and metathoraces, distinctly marginate throughout, EL/EW 1.14–1.16 (M 1.15); sides with humeri distinctly projected forwards, weakly arcuate in basal third, straightly convergent to apical fourth, then rounded to distinct sutural angles; suture completely conjoined in basal 3/8, straightly narrowly dehiscent to apical fourth, then more widely so

Figs. 1–4. Two new *Necydalis* species from Southwest China. — 1, *N. (Necydalis) uenoi* NIISATO, sp. nov., from northern Sichuan, holotype ♂; 2, ditto, allotype ♀; 3, *N. (N.) choui* NIISATO, sp. nov., from Mt. Dayao Shan, Guangxi, holotype ♂; 4, ditto, allotype ♀.



to the sutural angles; disc well convex, distinctly longitudinally depressed along suture except for bases and apical fifth which are markedly convex, rather distinctly declivous at sides, closely coarsely punctured except for bases which are only provided with a few moderate punctures, partly with dense fine pale yellow pubescence near scutellum and apices. Hind wings reaching basal third of abdominal tergite 6.

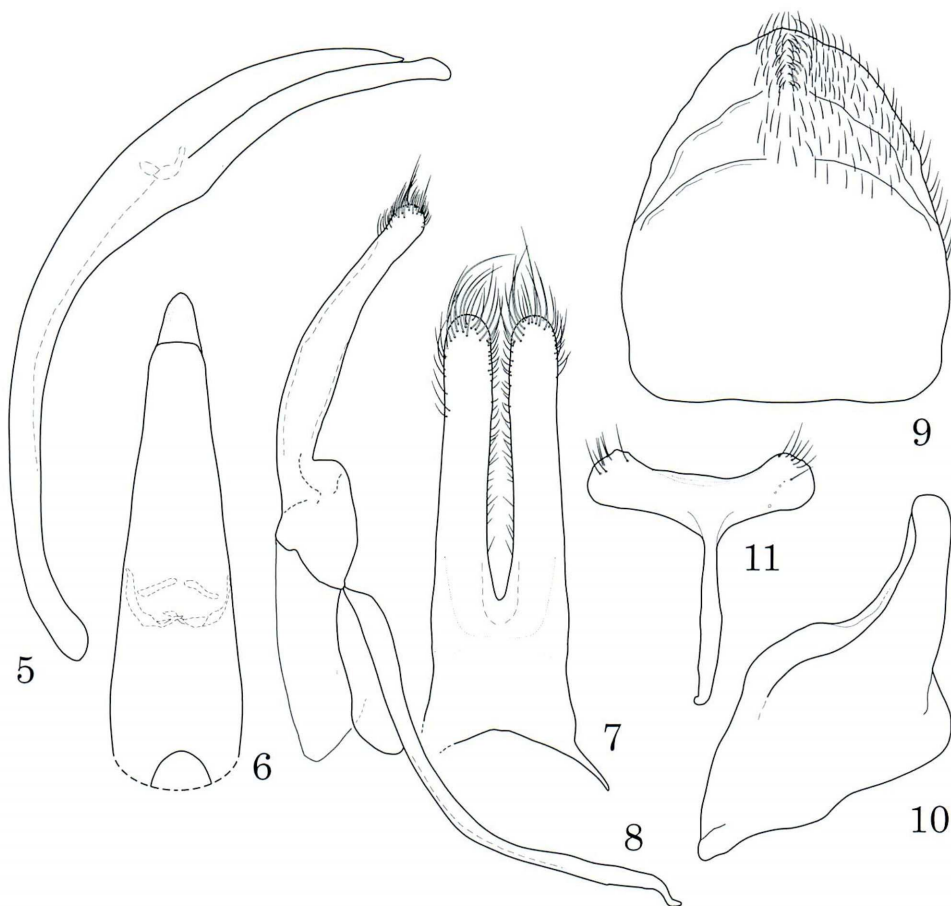
Prosternum not so convex, with deep transverse furrows in apical half, clothed with long golden yellow hairs. Meso- and metathoraces slightly voluminous but distinctly convex, closely coarsely punctured in most parts, densely clothed with golden yellow pubescence, the pubescence particularly dense on mesepimeron, at basal part of metepisternum and along anterior margin of hind coxae.

Abdomen moderately elongate, 0.7 times as long as body, slightly shagreened, rather sparsely clothed with pale yellow pubescence; ventrite 1 slightly dilated to somewhat thickened apex, ventrite 2 weakly thickened at apical 2/5 and 0.7 times as long as the preceding, ventrite 3 more conspicuously thickened in apical half and nearly equal in length to the preceding, ventrite 4 almost simple and slightly dilated apicad. Anal ventrite distinctly arcuately dilated to apical 3/10, then narrowed in sinuate lines to apical margin which is bisinuate concave; disc gently triangularly impressed along mid-line, with deep semicircular apical concavity. Tergite 8 arcuately narrowed to narrowly rounded apex, well convex in basal half though strongly declivous to depressed apical part which has a weak median ridge. Sternite 8 with moderately long lobes, with several setae near apical sides.

Legs not so long, rather stout, exceeding abdominal apex at first hind tarsal segment; hind femur moderately clavate in apical 3/7; hind tibia gently sinuate, gradually dilated apicad; hind tarsus not so thick, with first segment nearly twice the following two segments combined.

Male genital organ moderately convex and thick. Median lobe rather thick, distinctly narrowed to apex, gently sinuate at sides, with convex apical lobe, moderately arcuate in profile; dorsal plate almost transversely truncate at apex, exposing bluntly pointed apical part of ventral plate which is thickened at the extremity in profile; median struts nearly a half the length of median lobe. Tegmen distinctly longer than median lobe, moderately arcuate; paramere nearly 1/3 the length of tegmen, each lobe moderately broad and slightly approximate towards apex, provided with numerous long setae near apex, and with short ones along inner margin.

Female. Similar in general appearance to male, but different in the following points: 1) body distinctly broad and robust, with plump abdomen; 2) colour almost as in male, brownish even at the elytral apices, largely blackish in ventrites; antennae fairly short, a little less than a half the body length, reaching apical third of ventrite 1, with apical four segments distinctly reduced; pronotum nearly as wide as head, rounded at sides, weakly convex in basal 2/3, provided with weaker and smaller punctures on surface; last ventrite simply narrowed to truncate apex. Standard ratios of body parts as follows: HW/PA 1.21, HW/PW 1.00, FL/FB 0.70–0.71 (M 0.71), FB/FA 1.00, PL/PA 1.38–1.42 (M 1.40), PL/PW 1.14–1.17 (M 1.16), PB/PA 1.17, PW/EW



Figs. 5–11. Male genital organ of *Necydalis (Necydalis) uenoi* sp. nov., from northern Sichuan. — 5, Median lobe in lateral view; 6, ditto, apical part in dorsal view; 7, tegmen in lateral view; 8, paramere in dorsal view; 9, tergite 8 in dorsal view; 10, ditto, lateral view; 11, sternite 8 in ventral view.

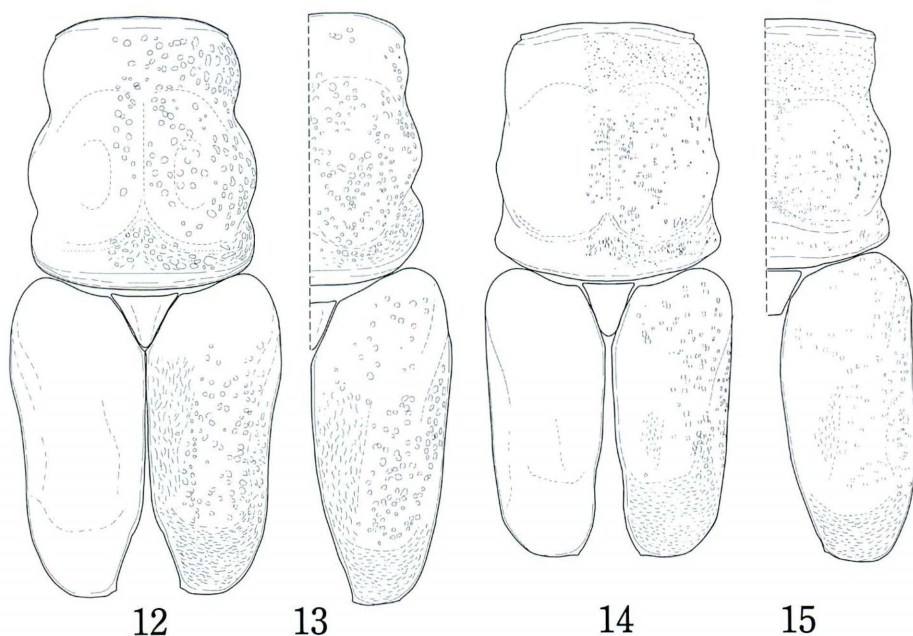
0.85, PL/EL 0.80–0.82 (M 0.81), EL/EW 1.19–1.20 (M 1.20).

Body length 25.0–25.5 mm in male, 26.0–26.5 mm in female.

Type series. Holotype ♂, “Shangliang”, northern Sichuan, SW. China, 24~29-V-2002, E. KUČERA leg. Allotype ♀ and 1 ♂, 1 ♀ paratypes: same data as for the holotype. The holotype is preserved in the National Science Museum (Nat. Hist.), Tokyo, and the other type specimens are in the private collection of T. NIISATO.

Distribution. Sichuan, SW. China.

Notes. *Necydalis uenoi* sp. nov. belongs to the *N. nanshanensis* group and has closer relationship to *N. shinborii* TAKAKUWA et NIISATO from northern Vietnam and *N. montipanus* NIISATO et N. OHBAYASHI from northeastern Laos. Three allopatric species share the long attenuate elytra with distinct sutural angles, the semicircular apical con-



Figs. 12–15. Pronota and elytra of two *Necydalis* species from Southwest China. — 12, *N. (Necydalis) uenoi* NIISATO, sp. nov., from northern Sichuan, ♂; 13, ditto, ♀; 14, *N. (N.) choui* NIISATO, sp. nov., from Mt. Dayao Shan, Guangxi, ♂; 15, ditto, ♀.

cavity of the last ventrite, and thickened median lobe and tegmen of the male genital organ. In spite of their similarities, the female of *N. uenoi* sp. nov. does not show distinct heterothallism in the coloration as in the other members of the *N. nanshanensis* group. In most known members of the species-group, the females have wholly brownish body, while in *N. uenoi* sp. nov., the female has quite black prothorax as in the male. The only other exception has been known in *N. katsuraorum* NIISATO from northern Vietnam. The female of this species has black pronotum as in that of *N. uenoi* sp. nov.

The specific name is dedicated to Dr. Shun-Ichi UENO, who has guided and encouraged me in taxonomic study for the past quarter century.

***Necydalis (Necydalis) choui* sp. nov.**

(Figs. 3, 4, 14, 15, 18, 20–26)

Relatively large species having slender body and appendages, and closest to *N. esakii* from Taiwan.

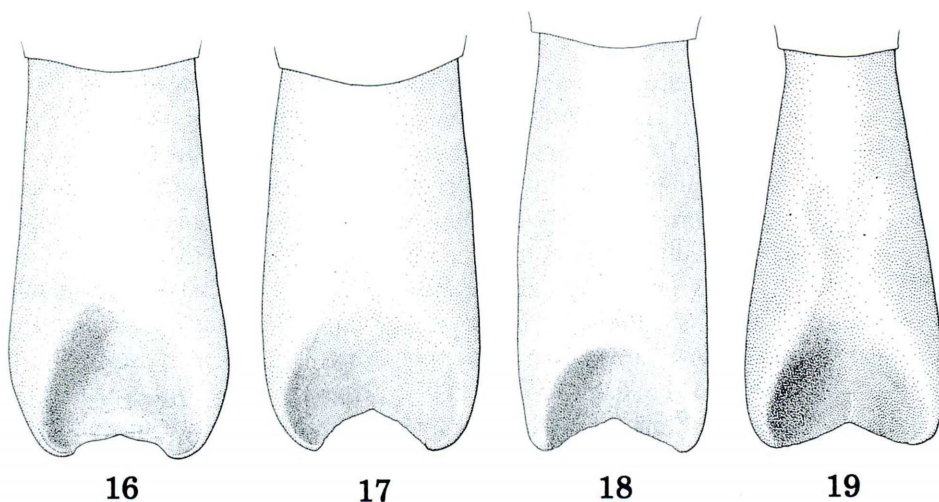
Male. Colour black in head and thoraces, shiny, brown and somewhat matted in the rest; mouthparts reddish brown, black at apices of mandibles, and in clypeus except for apical margin; antennae brown, somewhat shiny in basal four segments, gradually

yellowish distally; elytra brown, largely black in apical 2/9 which colour is obliquely extended along sides to just behind humeri, narrowly infusate along suture; hind wings translucent dark brown, gradually darkish distally; abdomen entirely brown, weakly shiny; legs brown, more darkish in clavate part of hind femur and apical 2/5 of hind tibia, dark brown in fore and mid femora, coxae black, hind tarsus yellow.

Head globose, voluminous, fairly broader than the maximum width of pronotum, closely, coarsely and more or less rugosely punctured, densely clothed with golden yellow pubescence, especially dense on frons and tempora, HW/PA 1.22–1.31 (M 1.26), HW/PW 1.04–1.11 (M 1.08); frons almost quadrate though slightly arcuate at sides, almost flattened, with a shallow but distinct median longitudinal furrow, running from the apical margin to posterior margin of occiput which is moderately raised, FL/FB 0.87–0.95 (M 0.91), FB/FA 0.95–1.00 (M 0.97); clypeus weakly raised, with apical lobe slightly transverse, truncate in margin, rather sparsely provided with small punctures except for apical margin, basal lobe triangular, not so transverse, almost smooth, with a few small punctures, fronto-clypeal suture not so wide and deep; genae moderate in depth, nearly a half the depth of lower eye-lobes; tempora rather weakly produced laterad, almost reaching the level of eyes; eyes large, distinctly prominent. Antennae slender though gradually thickened distally, long, 0.58–0.62 times as long as body, reaching base of ventrite 5, slightly flattened in segments 5–10, obtusely serrate at apices of segments 5–9, densely clothed with minute pale pubescence, and also dark brown one on dorsum of segments 1–5; scape broad, depressed on dorsum, 5/6 the length of segment 3, shallowly punctured, segments 3 and 4 hardly thickened apicad, the latter segment a little more than a half the length of the former, the remaining segments gradually decreasing in length, terminal segment weakly arcuate, bluntly pointed apicad.

Pronotum moderately long and rather narrow, fairly longer than the maximum width, slightly contracted to apex, PL/PA 1.27–1.29 (M 1.28), PL/PW 1.08–1.13 (M 1.10), PB/PA 1.09–1.12 (M 1.10), PW/EW 0.83–0.86 (M 0.85), PL/EL 0.83–0.87 (M 0.86); sides simply arcuate in apical fifth, with slightly arcuate lateral swellings at a level between apical 3/10 and basal 2/5, then weakly convergent to base; disc well convex, provided with a large callosity in basal 7/10 which is divided by a faint median ridge, and also with triangular raised area before base, moderately convex in apical fifth; surface somewhat shagreened, scattered with coarse punctures, with deep transverse furrows along apical and basal margins, the callosity partly smooth and irregularly with various sized punctures near base and apex, moderately clothed with long yellow hairs throughout, and largely with dense golden yellow pubescence at sides. Scutellum trapezoidal, reflexed at sides, strongly punctured, clothed with golden yellow pubescence.

Elytra rather short, slightly longer than the humeral width and the length of pronotum, almost reaching apical margin of metasternum, weakly narrowed to apices, slightly exposing the sides of meso- and metathoraces, weakly marginate throughout, EL/EW 1.07–1.13 (M 1.09); sides with humeri weakly produced forwards, straightly



Figs. 16–19. Last ventrites of *Necydalis* species. — 16, *N. (Necydalis) uenoi* NIISATO, sp. nov., from northern Sichuan; 17, *N. (N.) shinborii* TAKAKUWA et NIISATO, from northern Vietnam; 18, *N. (N.) choui* NIISATO, sp. nov., from Mt. Dayao Shan, Guangxi; 19, *N. esakii* MIWA et MITONO, from Taiwan.

convergent to the middle, then arcuately so to rounded apices, which have minute dents at sutural corners; suture not conjoined even near base, almost straightly dehiscent to apical fifth, then a little more widely so to apices; disc hardly convex, slightly depressed along middle of suture, moderately raised in apical fifth, irregularly provided with coarse large punctures, except for apical fifth and sides which are closely rugged, partly with dense fine golden yellow pubescence near scutellum and apices. Hind wings reaching base of abdominal tergite 6.

Prosternum short, clothed with pale pubescence. Meso- and metathoraces hardly expanded laterad, strongly convex, coarsely and closely provided with fine punctures, very densely clothed with golden yellow pubescence in most parts, except for middle of mesosternum and along basal margins of hind coxae.

Abdomen markedly long and elongate, 0.8 times as long as body, sparsely clothed with pale yellow pubescence; ventrites 1 and 2 gently emarginate at sides, slightly thickened at apex, the latter segment 7/10 the length to the former and equal in length to ventrites 3 and 4, ventrite 3 parallel-sided in basal half then weakly dilated apicad, ventrite 4 simply dilated apicad. Anal ventrite elongate though a little shorter than ventrite 4, with sides obliquely straightly divergent in basal fifth, then gently arcuate to apical fifth, and arcuately convergent to apical margin, which has shallow subtriangular concavity; disc gently impressed along mid-line, with apical part suddenly declivous in a semicircular shape. Tergite 8 elongate semicircular, weakly convex though almost flattened in basal 3/5, slightly emarginate at apex, entirely densely clothed with pubescence. Sternite 8 with short broad lobes, sparsely setose at sides,

Legs very long and slender, exceeding abdominal apex at middle of first hind tarsal segment; hind femur rather weakly clavate in apical third; hind tibia weakly sinuate, gradually dilated apicad; hind tarsus not thin, with first segment moderately arcuate, nearly twice the following two segments combined.

Male genital organ slender and slightly convex. Median lobe $5/6$ the length of last ventrite, slender, strongly attenuate apicad, gently arcuate at sides, with hardly convex apical lobe, slightly arcuate in profile; dorsal plate narrowly truncate at apex, exposing bluntly pointed apical part of ventral plate which is weakly thickened at the extremity in profile; median struts nearly a half the length of median lobe. Tegmen slightly longer than median lobe, moderately arcuate; paramere nearly $2/5$ the length of tegmen, slender, moderately thickened apicad, subparallel-sided in apical third which is provided with numerous rather short setae,

Female. Not unlike male and different in the following points: 1) body broad, with shorter appendages; 2) colour slightly more yellowish in general, yellowish brown on elytra with dark brown maculation in apices and sides; head a little narrower than pronotum; eyes weakly prominent; antennae fairly short, a little less than a half the body length, reaching basal third of tergite 4, with apical six segments reduced, hardly flattened and serrate; pronotum more distinctly contracted to apex, with base as wide as middle across lateral swellings, rather weakly convex on disc; last ventrite simply pointed to apex which is weakly concave. Standard ratios of body parts as follows: HW/PA 1.14, HW/PW 0.96, FL/FB 0.88, FB/FA 0.96, PL/PA 1.26, PL/PW 1.19, PB/PA 1.06, PW/EW 0.83, PL/EL 0.82, EL/EW 1.08.

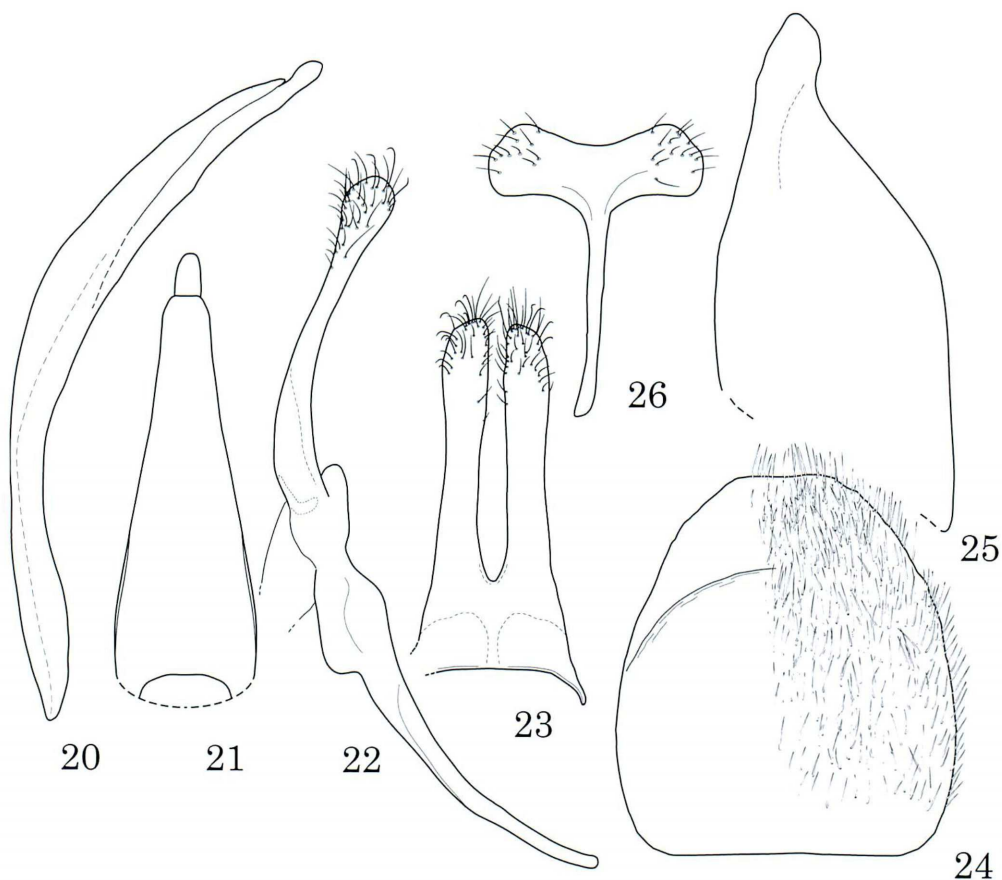
Body length 22.5–27.0 mm in male, 25.0 mm in female.

Type series. Holotype ♂, Mt. Dayao Shan, 1,200 m in alt., Jiaxin Yaozu Zizixian, Guangxi Zhuangzu Ziziqu, 21–IV–2000, W.-I CHOU leg. Allotype ♀, same locality and collector as for the holotype, 22–IV–2000. Paratypes: 2 ♂♂, same data as for the allotype. The holotype is preserved in the National Museum of Natural Science, Taichung, and the allotype and two paratypes are in the private collection of W.-I CHOU (Taipei) and T. NIISATO (Tokyo).

Distribution. Guangxi Zhuangzu Ziziqu, SW. China.

Notes. This new species is very similar in facies to *N. esakii* MIWA et MITONO from Taiwan, and may be a sibling species occurring in the continental side of China. It differs from the Taiwanese species in the following characteristics: 1) head fairly voluminous, with laterally produced tempora instead of rounded one; 2) antenna more slender and long, distinctly flattened and serrate in the apical segments; 3) pronotum not so distinctly contracted to apex, more weakly convex, with small and sparser punctulation, densely yellow pubescent at sides at least in male; elytra hardly even on surface, with shallow punctulation; last ventrite moderately dilated apicad, not so constricted at base as in that of *N. esakii*.

According to a personal communication from Mr. Wen-I CHOU, all the specimens of the type series of this new species were collected from the blossoms of *Castanopsis* trees on clear days. It is well known that a sibling species, *N. esakii*, is usually found



Figs. 20–26. Male genital organ of *Necydalis (Necydalis) choui* sp. nov., from Mt. Dayao Shan, Guangxi. — 20, Median lobe in lateral view; 21, ditto, apical part in dorsal view; 22, tegmen in lateral view; 23, paramere in dorsal view; 24, tergite 8 in dorsal view; 25, ditto, lateral view; 26, sternite 8 in ventral view.

on such blossoms in the central mountains of Taiwan. *Necydalis choui* is named after Mr. Wen-I CHOU who collected all the specimens of the type series of this interesting new species.

要 約

新里達也：四川省と広西壮族自治区から見つかったホソコバネカミキリ属の2新種。—— 四川省および広西壮族自治区より採集された標本に基づいて、ホソコバネカミキリ属の基亜属に所属する2新種を記載した。

1) *Necydalis (Necydalis) uenoi* NIISATO, sp. nov. (中名新称：上野細短翅天牛)

本新種は、内角が角張る比較的長い鞘翅の特徴から、ナンシャンホソコバネカミキリ種群の

なかでも、北ベトナムの *N. shinborii* TAKAKUWA et NIISATO および北東ラオスの *N. montipanus* NIISATO et N. OHBAYASHI に近縁である。本種はまた、同種群に広く知られる著しい雌雄異形が認められず、雌の外観は雄とほとんど変わらない。四川省北部の “Shangliang” から採集された標本に基づいて記載した。

2) *Necydalis (Necydalis) choui* NIISATO, sp. nov. (中名新称：周細短翅天牛)

エサキホソコバネカミキリ種群に属する新種である。とくに同種群のなかでも、台湾のエサキホソコバネカミキリ *N. esakii* MIWA et MITONO にもっとも近縁で、その大陸における姉妹種とみなされる存在である。広西壮族自治区の大揺山から採集された標本に基づいて記載した。

Correction

In a recent collaborative paper with N. OHBAYASHI, we made an error in writing the sex of the type series of *Necydalis atricornis*. In the *Elytra*, **32** (1), p. 217, line 4: for “Paratypes 2 ♀♀” read “Paratypes 2 ♂♂”.

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